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IN THE

Supreme Court of the United States

OCTOBER TERM, 1976

No. 76-1697

MacDERMID INCORPORATED,

Petitioner,

vs.

SOUTHERN CALIFORNIA CHEMICAL CO., INC.,

Respondent.

PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

ALBERT E. FEY
Attorney for Petitioner
FISH & NEAVE
277 Park Avenue
New York, N. Y. 10017

Of Counsel:
LARS I. KULLESEID
DAVID J. LEE
FISH & NEAVE
277 Park Avenue
New York, N. Y. 10017

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SOUTHERN CALIFORNIA CHEMICAL CO., INC.,
Respondent.

PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

Petitioner MacDermid Incorporated respectfully prays that a writ of certiorari issue to review the judgment and opinion of the United States Court of Appeals for the Ninth Circuit entered in this proceeding on January 10, 1977.

Opinions Below

The opinions of the Court of Appeals for the Ninth Circuit and the United States District Court for the Central District of California have not yet been reported. The opinions appear in the Appendix to this petition.

Jurisdiction

The judgment of the Court of Appeals for the Ninth Circuit was entered on January 10, 1977. A timely petition for rehearing *en banc* was denied on March 3, 1977. The present petition was filed within 90 days thereafter. The jurisdiction of this Court is invoked under 28 U. S. C. § 1254(1).

Questions Presented

1. Did the Courts below err in adopting the narrow rule of one Ninth Circuit decision that transactions with others for the purpose of technical and market acceptance testing of an invention cannot constitute "experimentation" exempt from 35 U. S. C. § 102(b) unless there are express or implied conditions pertaining to experimentation in contracts or related documents, rather than adopting the rule of this Court and other Circuits that all the facts and circumstances should be looked into in determining whether activity is "experimental"?

2. Did the Courts below err in adopting the narrow rule of some Circuits that activity for the purpose of market acceptance testing cannot be "experimental" activity exempt from 35 U. S. C. § 102(b), rather than adopting the contrary rule of this Court and other Circuits?

3. Did the Courts below err in adopting the narrow rule of one or two Circuits that activity must be "solely" for experimental purposes to qualify as "experimental" activity exempt from 35 U. S. C. § 102(b), rather than adopting the rule of this Court and other Circuits that activity need only be "substantially" for experimental purposes to be exempt from the statutory bar?

Statutory Provision Involved

United States Code, Title 35:

"§ 102 *Conditions for patentability* . . .

"A person shall be entitled to a patent unless—

* * *

"(b) the invention was . . . in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States . . ."

Statement Of The Case

The Nature Of The Case

This is an ordinary patent case in all respects save one: It presents for consideration by this Court a range of important, unsettled issues relating to the experimental use doctrine of patent law. That doctrine, established by decisions of this Court, holds that a "use" or "sale" for the purpose of experimenting with an invention does not fall within Section 102(b) so as to invalidate a patent applied for more than a year after the experimental use or sale.

Simple as the rule is to state, the various Courts of Appeals applying it have generated a variety of conflicting interpretations on several aspects of the rule, some of which are not consistent with the controlling pronouncements of this Court. The present case raises several such conflicts. One was generated by the Ninth Circuit Court of Appeals four years ago, when it formulated an unprecedented *per se* rule with respect to experimental activity in the sales context.* The Court of Appeals for the Fifth Circuit has openly rejected that rule as "excessively rigid" and a "trap for the unwary".**

The last definitive pronouncement in this area by this Court was made well before the turn of the century. And the topic is of current importance. Section 102(b) invalidates patents on otherwise meritorious inventions, novel and worthy of protection. Furthermore, the public interest is at stake in other ways, particularly with respect to conserving the limited resources of the Patent Office.

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* *Robbins Company* v. *Lawrence Manufacturing Company*, 482 F. 2d 426 (9 Cir. 1973).

** *In re Yarn Processing Patent Validity Litigation*, 498 F. 2d 271, 286-87 (5 Cir. 1974), *cert. denied sub nom. Sauquoit Fibers Co., Inc.* v. *Leesona Corp.*, 419 U. S. 1057 (1974).

In short, the present case provides the opportunity for this Court to resolve important controversies involving the experimental use doctrine. Accordingly, this petition should be granted.

Statement Of The Facts

The present action was commenced by petitioner on September 15, 1969 in the United States District Court for the Central District of California. The complaint charged respondent with infringement of two United States patents owned by petitioner, including Laue patent 3,321,503 (the "Laue patent"). Jurisdiction of the District Court was invoked under 28 U. S. C. § 1338(a).

The Laue patent relates to chemical solutions used principally in the printed circuit industry to remove copper from plastic printed circuit boards. The application for the Laue patent was filed on January 30, 1964.

Following a bench trial, the District Court held that "Laue patent claims 1 and 4 would be valid and infringed by defendant's AE-25 solution, but for being invalid under 35 U. S. C. § 102(b)" because of offers to sell or actual sales of the Laue invention by petitioner more than a year prior to the filing date of the application for the Laue patent (Finding of Fact 27; 23a*). In so ruling, the District Court relied on evidence of a handful of small-volume transactions by petitioner with certain selected customers. The District Court rejected petitioner's position that its few transactions were permissible under the experimental use doctrine.

The District Court reached this result on the basis of *Robbins Company* v. *Lawrence Manufacturing Company*, 482 F. 2d 426 (9 Cir. 1973) (hereinafter *"Robbins"*), in

* References herein to Findings of Fact by the District Court will be to both the particular Finding and the pertinent page of the Appendix hereto. References to the opinion of the Court of Appeals will be to the Appendix page only.

which the Court of Appeals for the Ninth Circuit formulated a *per se* rule that an invalidating "sale" within the meaning of Section 102(b) is shown irrebuttably *"unless* the contract of sale or the offering for sale contains an express or clearly implied condition that the sale or offering is made primarily for experimental use." 482 F. 2d at 433 (emphasis in original).

By reason of its adherence to the *Robbins* rule, the District Court either ignored or discounted a considerable body of evidence offered by petitioner to demonstrate the experimental purpose underlying its activities. Moreover, the District Court rejected petitioner's argument that field testing for the purpose of determining marketability of an invention, as opposed to its technical suitability, was permissible under Section 102(b) (Finding of Fact 22; 21a). Finally, the District Court may well have been influenced in its decision by the view—espoused by one or two Courts of Appeals—that a sale must be solely, rather than substantially, for an experimental purpose if it is to be exempt from Section 102(b).*

* The Seventh and perhaps also the Sixth Circuits have held that a use must be "purely" or "solely" experimental to be exempt from Section 102(b). *See, e.g., Minnesota Mining & Mfg. Co.* v. *Kent Industries, Inc.*, 409 F. 2d 99, 100 (6 Cir. 1969); *George R. Churchill Company* v. *American Buff Co.*, 365 F. 2d 129, 134 (7 Cir. 1966); and *Dart Industries, Inc.* v. *E. I. Du Pont De Nemours and Co.*, 489 F. 2d 1359, 1366 (7 Cir. 1973), *cert. denied*, 417 U. S. 933 (1974). In colloquy with counsel, the District Court took issue with counsel's choice of "substantially" as the test (Tr. 705) and said that *Robbins* "gives a rule, and then it waffles all around the rule" (Tr. 705). Then, after quoting from *Dart Industries, Inc.* v. *E. I. Du Pont De Nemours and Co., supra*, the District Court said: "So I am not sure exactly what the rule is" (Tr. 705). The District Court went on to state: "I would say the rule in *Robbins* is *not 'substantially'* . . . Let's assume that the test is 'substantially,' although there is some question there" (Tr. 705-706) (emphasis added). Finally, however, the Court went back to the Seventh Circuit rule, citing (Tr. 716) *George R. Churchill Co[illegible] American Buff Co., supra.*

On appeal, petitioner questioned the District Court's decision as demonstrably in conflict with holdings of this Court and numerous Courts of Appeals. In particular, petitioner pointed out that the *Robbins* decision had been rejected by the Fifth Circuit as "excessively rigid" and "a trap for the unwary" in *In re Yarn Processing Patent Validity Litigation*, 498 F. 2d 271, 286-87 (5 Cir. 1974), *cert. denied sub nom. Sauquoit Fibers Co., Inc.* v. *Leesona Corp.*, 419 U. S. 1057 (1974) (hereinafter "*Yarn Processing*").

The opinion of the Court of Appeals expressed the agreement of at least two members of the particular panel hearing the appeal with petitioner's views on the *Robbins* decision, stating: "some of us believe the *Robbins* standards to be unnecessarily restrictive . . ." However, the panel considered itself bound by *Robbins* (Op. 8a):

> "MacDermid's brief urges us to find that *Robbins* is unsound, too narrow, rejected by other circuits, and ignores non-technical testing. The members of this panel did not sit in *Robbins*. Even though some of us believe the *Robbins* standards to be unnecessarily restrictive, we pointed out at the oral arguments and reiterate here that this panel cannot overrule another panel under the rules of this Circuit. A reversal of *Robbins* can only be done *en banc*."

Reasons For Granting The Writ

I. The Decisions Below Are Unmistakably In Conflict With This Court's Decisions

A. The Experimental Use Doctrine As Established By This Court

Section 102(b) extinguishes an inventor's right to a patent if his invention has been "in public use or on sale" more than one year prior to the date an application for a patent on the invention was filed. The theory underlying

Section 102(b) is that a "public use" or "sale" conclusively evidences abandonment by the inventor of his right to a patent. *Elizabeth* v. *Pavement Co.*, 97 U. S. 126 (1877) (hereinafter "*Elizabeth*"). The purpose served by Section 102(b) is to encourage speedy filing of patent applications, not only to introduce the invention quickly into the public domain, but also to insure that the inventor's effective monopoly does not extend beyond the seventeen years allowed by the patent laws.

However, a strict, literal application of the "public use or on sale" bar of Section 102(b) would work unnecessarily harsh and undesirable results. As this Court has recognized for almost 100 years, an inventor should and must be entitled "to test the machine, and ascertain whether it will answer the purpose intended" before filing an application for a patent. *Elizabeth*, 97 U. S. at 135. A literal reading of Section 102(b) would fail to take account of the fact that legitimate tests of utility and feasibility frequently take more than a year and are oftentimes "public uses" or "sales" on a narrow construction of those terms.

An inflexible requirement that an application be filed within a year following any use or sale would not be in the public interest: "it is the interest of the public, as well as [the inventor], that the invention should be perfect and properly tested, before a patent is granted for it." *Elizabeth*, 97 U. S. at 137. Nor would the resources of the Patent Office be economically utilized by requiring, in effect, that applications be filed on incomplete inventions or on innovations which the inventor might himself conclude to be unworthy of patent protection upon further testing. Moreover, a narrow reading of Section 102(b) would encourage and necessitate the filing of multiple applications on an invention as it was improved by testing, a waste of time and resources on the part of both the Patent Office and the inventor.

For the above reasons, this Court has long recognized and upheld a broad exception to the "public use and on sale" bar of Section 102(b). The exception is commonly known as the "experimental use" doctrine. It holds that a use or sale, if substantially for the purpose of experimenting with an invention to improve upon it or to test its utility, does not invoke the statutory bar of Section 102(b).

The foundation case on the doctrine of experimental use is *Elizabeth,* which related to a patent on pavement construction. The inventor in that case, Nicholson, had laid down a section of pavement for the purpose of testing its qualities some six years before applying for a patent on the pavement. The road in which the pavement was put down was a toll road, the property of a corporation in which Nicholson owned stock and which he served as treasurer. In answer to the contention of an infringer sued by Nicholson that his pavement had been in "public use or on sale" within the meaning of Section 102(b), this Court ruled that his activities were not within the statute:

> "To determine this question, it is necessary to examine the circumstances under which this pavement was put down, and the object and purpose that Nicholson had in view.
>
> * * *
>
> "That the use of the pavement in question was public in one sense cannot be disputed. But can it be said that the invention was in public use? The use of an invention by the inventor himself, or of any other person under his direction, by way of experiment, and in order to bring the invention to perfection, has never been regarded as such a use." 97 U. S. at 133-34.

Later in its opinion, the Court made the additional points that the experimental use could be by someone other than the inventor and could relate, not only to technical tests of the invention, but also to its utility to the public:

> "It would not be necessary . . . that the machine should be put up and used only in the inventor's own shop or premises. He may have it put up and used in the premises of another, and the use may inure to the benefit of the owner of the establishment. Still, if used under the surveillance of the inventor, and for the purpose of enabling him to test the machine, and ascertain whether it will answer the purpose intended, and make such alterations and improvements as experience demonstrates to be necessary, it will still be a mere experimental use, and not a public use, within the meaning of the statute.
>
> "Whilst the supposed machine is in such experimental use, the public may be incidentally deriving a benefit from it." 97 U. S. at 135.

Elizabeth has never been departed from by this Court. It has been cited with approval and often quoted at length in numerous decisions of this Court, including *Egbert* v. *Lippmann,* 104 U. S. 333 (1881); *Smith and Griggs Mfg. Co.* v. *Sprague,* 123 U. S. 249 (1887) (hereinafter *"Smith and Griggs"*); *Root* v. *Third Avenue Railroad,* 146 U. S. 210 (1892); and *Electric Battery Co.* v. *Shimadzu,* 307 U. S. 5 (1939).

Smith and Griggs, decided in 1887, was the last decision in which this Court made important clarifications of the experimental use doctrine. The patent in that case related to a machine for making buckle parts. For a four-year period prior to applying for the patent, the inventor used the machine in day-to-day manufacturing operations, producing approximately 7 million parts which were sold to the public. Near the end of the four-year period, the inventor made certain improvements to the machine and applied for a patent on various elements of his perfected machine, many of which had been utilized in the preceding four years of commercial manufacture.

On those aggravated facts, this Court rejected the inventor's claim of experimental use on the ground that his manufacturing operations could not be characterized "as substantially for purposes of experiment." 123 U. S. at 256, 266. However, the Court noted without equivocation that use of an invention "substantially for purposes of experiment" would remain exempt from Section 102(b), even if the invention were sold for profit:

> "A use by the inventor, for the purpose of testing the machine, in order by experiment to devise additional means for perfecting the success of its operation, is admissible; and where, as incident to such use, the product of its operation is disposed of by sale, such profit from its use does not change its character; but, where the use is mainly for the purposes of trade and profit, and the experiment is merely incidental to that, the principal and not the incident must give character to the use. The thing implied as excepted out of the prohibition of the statute is a use which may be properly characterized as substantially for purposes of experiment." 123 U. S. at 256.

The Ninth Circuit's *Robbins* decision, to which we now turn and upon which the Courts below invalidated petitioner's Laue patent, is in sharp contrast to *Smith and Griggs* and *Elizabeth*.

B. The Ninth Circuit *Robbins* Rule Followed By The Courts Below Is Directly At Odds With The Controlling Precedents Of This Court

At issue in *Robbins* was a patent on a type of cutter designed for attachment to a large tunnel boring machine.*

* As described by the Court of Appeals:
"The boring machine has at its front a rotating headplate to which an array of cutters are attached. The remainder of the machine is a locomotive-like device for driving the front end into the face of the earth while rotating the headplate." 482 F. 2d at 428.

More than a year prior to applying for a patent on the cutter, plaintiff sold a boring machine on which the cutters were installed, and leased another machine so equipped. The lease granted the lessor an option to purchase the rented machine. Neither the contract nor the lease, each of which related to an entire "locomotive-like" device, mentioned experimentation in connection with the cutters.

When plaintiff subsequently sued a competitor for infringement, it submitted to the District Court affidavits attesting to the plaintiff's experimental purpose in installing the cutters in the boring machines sold and leased. On that basis, the District Court refused to grant defendant summary judgment of invalidity under Section 102(b).

On appeal, the Ninth Circuit Court of Appeals reversed and directed that summary judgment be entered in favor of defendant on the basis of a new "rule" distilled by the Court of Appeals from a handful of cases, none of them from this Court:*

> "A sale or an offering for sale
>
> "precludes any inquiry into the experimental nature of the sale *unless* the contract of sale or the offering for sale contains an express or clearly implied condition that the sale or offering is made primarily for experimental use.
>
> "Thus the sale or offering would not ipso facto invalidate the patent nor preclude further inquiry into the experimental nature of the use where the contract or the offer stated that the sale was for experimental purposes . . .; or showed that the device was still experimental and that no workable prototype had been made . . .; or required that the invention should be kept confidential or from public view, or that reports on the use of the invention should

* The leading Supreme Court case, *Elizabeth*, was not even mentioned, and *Smith and Griggs* was cited for a proposition which it clearly does not support. See discussion at pages 12-13, *infra*.

> be supplied to the inventor . . .; or other similar statements appeared from which it could clearly be implied that the sale or the offering was made for an experimental purpose." 482 F. 2d at 433.

Thus, in the Ninth Circuit, any sale or offering for sale more than a year prior to the application date *per se* invalidates a subsequently obtained patent unless express or implied statements relating to experimentation are contained in documents relating to the offer or sale, without taking into account the inventor's purpose in making the offer or sale or the complete set of circumstances surrounding the transaction.

This wooden, inflexible rule finds no support in precedents of this Court. *Elizabeth,* for example, held that "it is necessary to examine the circumstances under which [the invention] was put down, and the object and purpose that [the inventor] had in view" in determining whether a use or sale is experimental in nature or a bar under Section 102(b). 97 U. S. at 133.*

The conflict between *Robbins* and this Court's rulings is confirmed by the context in which the *Robbins* opinion cites *Smith and Griggs*:

> "Where there has been commercial exploitation, the courts have generally found there was 'public use' and not experimental use. *Smith & Griggs Mfg.* . . . But even in case of a sale where the real purpose was experimentation, the patent is still valid. . . . Thus obtaining some monetary return from a sale made primarily for experimental purposes may not constitute in every case a 'commercial exploitation' which invalidates the patent" 482 F. 2d at 434.

* Writing on this very issue, Judge Learned Hand said: "his [the inventor's] primary purpose must be the test, though incidentally he may get what profit he can. This is the doctrine of *Smith & Griggs* . . . No doubt it is hard to apply, but so are many legal doctrines." *Aerovox Corporation* v. *Polymet Mfg. Corporation,* 67 F. 2d 860, 862 (2 Cir. 1933). In effect, *Robbins* promulgates an inflexible rule in an effort to avoid the evaluation of facts required by the experimental use doctrine.

There is not a whisper of this holding in *Smith and Griggs* or in any other opinion of this Court. Quite to the contrary, *Smith and Griggs* made it clear that sales having substantially an experimental purpose are never "sales" within the meaning of Section 102(b), despite the fact that "commercial exploitation" by way of profits results. The explicit holding of the last sentence quoted above—that sales may invalidate a patent even if made primarily for an experimental purpose—is the underpinning of the *Robbins* rule and a plain demonstration of the conflict between *Robbins* and cases such as *Smith and Griggs* and *Elizabeth.*

The application of the *Robbins* rule by the Court of Appeals in that case leaves no room for doubt that the rule is and was intended to be as strict and draconian as it appears in literal text. After discrediting the plaintiff's affidavits as statements of mere "subjective intent" and as insufficient to establish a substantial experimental purpose, the Court focused narrowly on the contracts at issue, stating:

> "Applying this rule to the facts of this case, it is clear that in both the Hydro-Electric [sale] and the Bles [lease] transactions there were sales and offerings for sale, with no express or clearly implied condition that they were for an experimental purpose. The device had been completed and was in existence. No requirements of secrecy were imposed on Hydro-Electric or Bles, nor were they required to report on the results of the supposed experimentation. Summary judgment was therefore proper." 482 F. 2d at 434.

Similarly, *Robbins* was followed to the letter in *Kalvar Corporation* v. *Xidex Corporation,* 384 F. Supp. 1126 (N. D. Cal. 1973), in which a claim of experimental use was rejected:

> "It being undisputed that in none of the activities in this action, including both such sales as the Court has found to occur, and such offerings as well, was any such condition either expressly or implicitly contained, the claim of Kalvar must be rejected *in toto*." 384 F. Supp. at 1136.

The District Court in this case followed *Robbins* in precisely the same manner, finding:

> "For each of the X-381 solution transactions before January 30, 1963 there was neither an express nor a clearly implied condition that the use, sale or offering was made primarily for experimental use. Accordingly, the Laue patent is invalid under 35 U. S. C. § 102(b)" (Finding of Fact 8; 18a).

In much the same way, the Court of Appeals affirmed the District Court:

> "The contracts or offers do not show that there was any restriction on keeping the product confidential or stating that the sale was for experimental purposes, or that test results must be supplied to MacDermid" (Op. 8a).

Other conflicts with the rulings of this Court are also raised by the decisions below. The District Court's apparent view that sales must be "solely" for the purpose of experimentation to be exempt from Section 102(b) is in direct conflict with *Smith and Griggs*. Similarly, the District Court's holding that sales for purposes of market acceptance testing are not exempt from Section 102(b) is in direct conflict with *Elizabeth*. That case approved experiments "to test the [invention], *and* ascertain whether it will answer the purpose intended . . ." 97 U. S. at 134 (emphasis added).

As the following discussion demonstrates, the lower court decisions in this case raise the same conflicts with decisions in other Circuits as they raise with respect to the decisions of this Court.

II. The Decisions Below Are Also In Conflict With Decisions Of Other Circuits

A. The *Robbins* Rule Is Unprecedented And Stands Expressly Rejected By The Fifth Circuit

The *Robbins* rule is entirely without precedent. The *Robbins* opinion suggests that its origin lies in a collection of six cases from various Circuits.* However, not one of those cases establishes the sort of inflexible rule adopted by the Ninth Circuit in *Robbins*. Nor does a single other earlier case from any Circuit of which we are aware.** The reason is not hard to fathom: *Robbins* is totally out of step with the decisions of this Court and lower courts following those decisions.***

This is not a matter of conjecture. *Robbins* has been expressly rejected in no uncertain terms by the Fifth Circuit Court of Appeals in *Yarn Processing*. There, the District Court granted partial summary judgment of patent

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* *Ajem Laboratories, Inc.* v. *C. M. Ladd Co.*, 424 F. 2d 1124 (6 Cir. 1970), *cert. denied*, 400 U. S. 830 (1970); *Cataphote Corporation* v. *De Soto Chemical Coatings, Inc.*, 235 F. Supp. 936 (N.D. Cal. 1964), *aff'd*, 356 F. 2d 24 (9 Cir. 1966), *cert. denied*, 385 U. S. 832 (1966); *Amerio Contact Plate Freezers, Inc.* v. *Belt-Ice Corporation*, 316 F. 2d 459 (9 Cir. 1963), *cert. denied*, 375 U. S. 902 (1963); *Piet* v. *United States*, 176 F. Supp. 576 (S. D. Cal. 1959), *aff'd per curiam*, 283 F. 2d 693 (9 Cir. 1960); *Austin Machinery Co.* v. *Buckeye Traction Ditcher Co.*, 13 F. 2d 697 (6 Cir. 1926), *cert. denied*, 273 U. S. 747 (1927); and *Ushakoff* v. *United States*, 327 F. 2d 669 (Ct. Cl. 1964).

** Outside of the Ninth Circuit, *Robbins* has been cited only once with approval, in *Application of Dybel*, 524 F. 2d 1393, 1401 (C. C. P. A. 1975): "Appellant's failure to communicate to any of the purchasers or prospective purchasers of his device that the sale or offering was for experimental use is fatal to his case. *Robbins* . . ." And *Application of Dybel* has been criticized for its adoption of *Robbins*, "the wrong precedent." *Third Annual Judicial Conference of the United States Court of Customs and Patent Appeals*, 72 F. R. D. 239, 294-95 (1976) (Remarks of Gerald Rose, Esq.).

*** As recognized even by the District Court below:

> "The Ninth Circuit really restricts that experimental use exception" (Tr. 712).

invalidity because the inventors had licensed a third party to use the patented process more than a year preceding the application date. In reversing, the Fifth Circuit rejected *Robbins* following an exhaustive review of the case law on experimental use, including the leading cases of this Court:

> "Appellees urge adoption of the Ninth Circuit's *Robbins* rule. . . . In our view, such a rule merely lays a trap for the unwary. It could work injustice by preventing proof of a primarily experimental use merely because an inventor or his counsel had inadvertently neglected to include sufficient indication of experimentation within a sales contract or offer. We regard the rule as excessively rigid, and we expressly decline to adopt it." 498 F. 2d at 286-87.

Almost certainly the *Robbins* "rule" would work the greatest unfairness on impecunious inventors, who are least likely to have the advice of counsel as to the need to put in writing some magic phrase. These are the same inventors who, for lack of funds, will hold off filing a patent application until sufficient experimentation demonstrates the worth of an invention.

Yarn Processing is the first case to reject *Robbins* outright. It surely will not be the last if *Robbins* retains its vitality. Doubts about *Robbins* and its rule were even expressed by Judges of the Ninth Circuit itself in this action: "some of us believe the *Robbins* standards to be unnecessarily restrictive" (Op. 8a).

B. Market Acceptance Testing As Experimental Use; Another Conflict In The Circuits

The decisions below that activities for the purpose of market acceptance testing are not exempt from Section 102(b)* are not entirely without support. At least one

* The District Court rejected petitioner's transaction with Steel Products Engineering Co. as non-experimental because "the SPECO transaction may have been market acceptance testing, but it was not experimental testing to determine how the solution should be made, or what ingredients should be used" (Finding of Fact 22; 21a).

other Circuit—the Seventh—has decided cases to that effect. *See George R. Churchill Company* v. *American Buff Co.*, 365 F. 2d 129, 134 (7 Cir. 1966).

However, the weight of authority is to the contrary and thus in conformity with *Elizabeth*. A conspicuous example is Judge Learned Hand's opinion in *Aerovox Corporation* v. *Polymet Mfg. Corporation*, 67 F. 2d 860, 862 (2 Cir. 1933):

> "For example, in *Elizabeth* v. *Pavement Co.*, 97 U. S. 126, 24 L. Ed. 1000, it did not appear that Nicholson, the inventor, delayed for any other reason than to learn how well his pavement would wear; apparently *it was already as good as he hoped to make it*. At any rate we shall assume that an inventor may wait longer, may *wait until he learns whether his invention is of enough value to justify an application for a patent*. On this view he may test it, not only to put it into definitive form, but *to see whether his ideas are worth exploiting*" (emphasis added).

To the same effect is *Cali* v. *Eastern Airlines, Inc.*, 442 F. 2d 65, 70-1 (2 Cir. 1971), in which the District Court held a patent invalid on the assumption that testing to determine whether an invention should be adopted or rejected could not qualify under the experimental use doctrine. The Court of Appeals in an opinion by Judge Kaufman reversed, stating:

> "We see no good purpose in attempting to distinguish sharply between experimentation with an eye to going 'back to the drawing board' for modification and rethinking in the event of initial failure on the one hand and *experimentation directed more toward discovering whether a novel invention should be adopted and marketed* or discarded in its entirety. Indeed, we have previously said as much in *Aerovox Corp.* v. *Polymet Mfg. Corp.* . . .
>
> "The leading case defining the reach of the experimental use exception [is] *Elizabeth* v. *Pavement Co.* . . . There was no indication that the inven-

> tor put the pavement to the test of six years' public wear to determine what improvements he might make, rather than simply to discover whether the idea was worth pursuing. Indeed, the Court's decision in favor of the patentee was premised on the assumption that the aim of the test might be 'to bring his invention to perfection, *or* [emphasis in original] to ascertain whether it [would] answer the purpose intended.' 97 U. S. at 137 (emphasis added). *Either sort of experimental use—if indeed any such sorting is tenable—would bring the invention within the experimental use exception* because 'it is the interest of the public, as well as [of the inventor] that the invention should be perfect *and* [emphasis in original] properly tested' " (emphasis added).

The Fifth Circuit is in full accord with these Second Circuit authorities, having cited them and *Elizabeth* with complete approval in *Yarn Processing* (498 F. 2d at 282-83). Clearly, the decisions below in the present case are in conflict with the decisions of other Circuits on the issue of market acceptance testing.

C. Experimental Use As Requiring A Purpose "Solely" Rather Than "Substantially" Of Experimentation; A Further Conflict In The Circuits

Despite the clarity of *Smith and Griggs* in stating that experimental activity exempt from § 102(b) need be pursued "substantially", and not "solely", for experimental purposes, a contrary vein of authority requiring "purely" or "solely" experimental activity has appeared in the Seventh and possibly Sixth Circuits, epitomized by cases such as *Minnesota Mining & Mfg. Co. v. Kent Industries, Inc.*, 409 F. 2d 99, 100 (6 Cir. 1969); *Amphenol Corporation* v. *General Time Corporation*, 397 F. 2d 431, 437 (7 Cir. 1968); and *George R. Churchill Company* v. *American Buff Co.*, 365 F. 2d 129, 134 (7 Cir. 1966). The case at bar may have been decided under or at least influenced by the "solely" experimental rule of those cases, adding the Ninth Circuit as authority for that view. As discussed, the District Court expressed confusion on this question and appeared to adopt the more restrictive rule, citing *George R. Churchill Company* v. *American Buff Co.*, *supra*, p. 5n.

However, the majority rule follows *Smith and Griggs*. *See, e.g., Yarn Processing, supra; Dunlop Company, Limited* v. *Kelsey-Hayes Company*, 484 F. 2d 407, 413 (6 Cir. 1973), *cert. denied*, 415 U. S. 917 (1974); *Atlas* v. *Eastern Air Lines, Incorporated*, 311 F. 2d 156 (1 Cir. 1962), *cert. denied*, 373 U. S. 904 (1963). Indeed, in some decisions predating the present case, the Ninth Circuit followed *Smith and Griggs*. *See, e.g., Pickering* v. *Holman*, 459 F. 2d 403 (9 Cir. 1972). This raises yet another issue on which the Circuits are divided and yet another example of the unduly restrictive approach taken by the Courts below.

Conclusion

Under a proper construction of the experimental use doctrine, petitioner's activities with respect to the Laue invention were plainly experimental and therefore not such as to invalidate a patent which the District Court held to be meritorious. Indeed, respondent's president admitted that the kind of testing petitioner was pursuing with respect to the Laue invention was common practice in the industry, and was the sort of testing which had to be performed on such inventions to ascertain whether or not they would fulfill the purpose for which they were intended. Under the decisions of this Court, such testing is experimental and not invalidating.

However, the experimental use doctrine plainly is unsettled in several respects and far from uniform among the Circuits. Petitioner might well have prevailed below had its action been in the Second or Fifth Circuits. But it was preordained to fail in the Ninth Circuit once *Robbins*

was decided. With all due respect, we submit that the existing situation stands as an embarrassment to the principle of nationwide uniformity of decisional law.

For all the above reasons, this petition for a writ of certiorari should be granted.

Respectfully submitted,

ALBERT E. FEY
Attorney for Petitioner,
277 Park Avenue
New York, N. Y. 10017

Of Counsel:
LARS I. KULLESEID
DAVID J. LEE
FISH & NEAVE
277 Park Avenue
New York, New York 10017

May 31, 1977

Order on Petition for Rehearing, Filed March 3, 1977

IN THE

UNITED STATES COURT OF APPEALS

FOR THE NINTH CIRCUIT

No. 74-2791

MACDERMID INCORPORATED, a corporation,
Plaintiff-Appellant,

vs.

SOUTHERN CALIFORNIA CHEMICAL CO., INC.,
a corporation,
Defendant-Appellee.

Order

Before: HUFSTEDLER and WRIGHT, Circuit Judges, and VAN PELT, Senior District Judge.

The panel as constituted in the above case has voted to deny the petition for rehearing. Judges Hufstedler and Wright have voted to reject the suggestion for rehearing en banc.

The full court has been advised of the en banc suggestion, and no judge of the court has requested a vote on it. Fed. R. App. P. 35(b).

The petition for rehearing is denied and the suggestion for a rehearing en banc is rejected.

UNITED STATES COURT OF APPEALS

FOR THE NINTH CIRCUIT

No. 74-2791

MACDERMID INCORPORATED, A Corporation,
Plaintiff-Appellant,

vs.

SOUTHERN CALIFORNIA CHEMICAL CO., INC.,
A Corporation,
Defendant-Appellee.

No. 74-2991

MACDERMID INCORPORATED, A Corporation,
Plaintiff-Appellant,

vs.

SOUTHERN CALIFORNIA CHEMICAL CO., INC.,
A Corporation,
Defendant-Appellee.

Memorandum

APPEAL FROM THE UNITED STATES DISTRICT COURT
FOR THE CENTRAL DISTRICT OF CALIFORNIA

Before: HUFSTEDLER and WRIGHT, Circuit Judges, and VAN PELT, Senior District Judge*

This suit charges infringement by the defendant, Southern California Chemical Co., Inc., (Southern) of certain claims contained in each of two patents issued to plaintiff, MacDermid Incorporated (MacDermid). The Laue patent, No. 3,231,503, was applied for January 30, 1964 and issued January 25, 1966, and the Slominski patent, No. 3,466,208 was first applied for March 6, 1967 with a second application made December 18, 1967 and issued September 9, 1969.

* The Honorable Robert Van Pelt, Senior Judge, District of Nebraska, sitting by designation.

MacDermid charged Southern with infringement of claims 1 and 4 of Laue[1] and with infringement of claims 1, 3 and 4 of Slominski.[2] Southern admitted infringement but claimed the patents were invalid for reasons primarily relating to the conditions for patentability in 35 U. S. C. § 102 and 35 U. S. C. § 103. The antitrust issues raised by defendant as a counterclaim were severed from the patent issues by pretrial conference order. The patent issues were tried without a jury.

Both patents were held invalid by the trial court. Claims 1 and 4 of the Laue patent were found to be:

> in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States

in violation of 35 U. S. C. § 102(b), although as to each claim the court found it would not be obvious to a man of ordinary skill in the art. Claims 1, 2 and 3 of the Slominski patent were invalidated under 35 U. S. C. § 103 because the solutions were:

> obvious at the time the invention was made to a person having ordinary skill in the art.

The trial court likewise found claims 4 and 5 of Slominski defined processes so similar to the Laue patent that their subject matter would have been obvious to a person having ordinary skill in metal dissolution. Claims 1, 4 and 5 of the Slominski patent were also invalidated because they had been in public use or on sale for more than one year prior to the patent application.

The following issues are before us:

1. Whether the District Court erred in finding the Laue patent was "on sale" for more than one year prior to the patent application.

a. Did the District Court in deciding this issue correctly apply *Robbins* v. *Lawrence*, 482 F. 2d 426 (9th Cir. 1973).

b. Is *Robbins* v. *Lawrence, supra*, an incorrect and too narrow interpretation of the standards for experimental testing.

2. Whether the trial court erred in finding that the subject matter of Claim 3 of the Slominski patent was obvious.

3. Whether the trial court erred in finding that the Laue patent was not obvious to a man of ordinary skill in the art.

4. Whether the trial court erred in not awarding attorneys fees to Southern under 35 U. S. C. § 285.

MacDermid presents the first two issues, and Southern cross-appeals the last two issues.

While we shall endeavor to discuss the issues, we wish at the outset to make clear that this panel makes no claim to be the possessors of great knowledge in the field of chemistry beyond the evidence adduced before the trial court. For an understanding of the problems which confronted the trial judge and confront this court, a brief analysis of the patents in issue is first necessary, followed by a limited discussion of the prior art.

Both of these patent solutions can be used to dissolve metals such as copper, zinc, brass, cadmium and silver. However, the patents in question are used mostly in the printed circuit industry, where chemical solutions etch or strip unwanted copper off materials such as plastic or steel, leaving the desired circuit configuration. The need for and use of such a stripping solution is, for the practical purposes

of this memorandum, and in language understandable to a non-chemist, well and concisely stated in the translation of the French patent, No. 1,469,901 which is discussed by both parties and is in evidence.

> In industry the dissolution of copper or etching on copper is very widespread. For example, when printed circuits are manufactured, a reproduction of the conductors is first deposited in a colored printing ink resistant to attack or else in a photographic emulsion on sheets of copper 35 or 70 microns thick, which are cemented onto a material with a nonconducting base, by the process of printing with a stencil or else by a process of photomechanical transfer. Then the unprotected copper is eliminated in suitable installations, and the model of the circuit desired is obtained.
>
> * * *
>
> By the same process are also manufactured printing plates, starting with copper, for photographic printing.

P. 1-2, French Translation.

The solution of both patents includes water, sodium chlorite, ammonium bicarbonate and ammonium hydroxide. The Slominski solution differs from Laue in that it uses a mixture of ammonium chloride and ammonium carbonate instead of the ammonium carbonate alone. The relative amounts of chemicals called for in either patent are not critical. It is claimed that the Slominski solution results in a faster stripping of copper, an increase in the copper retention capacity, and eliminating solder darkening which resulted when the Laue solution was used.

There were many patents prior to Laue or Slominski which dealt with similar solutions. Eleven references were cited by the examiner in Laue, the earliest reference being

Ellis, No. 1,657,666 in 1928. The earliest reference cited in any of the patents cited in Laue is in turn VanDeLinde, granted October 11, 1898. However, the major prior patents under consideration in the trial court were LeSueur, No. 755,302, applied for May 27, 1899 and granted on March 22, 1904, Meyer, No. 2,561,065, Lamborn, No. 2,810,717, and a French patent, No. 1,469,901 granted January 9, 1967 and officially published February 17, 1967. Laue was the only reference cited in the application for the Slominski patent.

The field was also covered by text writers and by published articles and by competitors, such as Hubbard Hall, a division of Kerr McGee, who were using solutions which they hadn't patented. It is clear that both of the patents for chemical etching solutions were issued in a field where a great deal of experimentation had taken place, not only in the United States, but in foreign countries as well.

The Laue Patent

The district court held the Laue patent was on sale for more than one year prior to the patent application. MacDermid presented evidence in the district court and argues here that any transactions between them and real or potential customers were experimental in nature and not for commercial purposes. They contend that it was imperative the solution be tested under plant conditions and thus it was necessary for them to supply large quantities of the solution or the chemicals which were used to make it. The law in this circuit regarding experimentation was set out in *Robbins, supra.*

> A sale or an offering for sale
>
> precludes any inquiry into the experimental nature of the sale *unless* the contract of sale or the offering

> for sale contains an express or clearly implied condition that the sale or offering is made primarily for experimental use.
>
> Thus the sale or offering would not ipso facto invalidate the patent nor preclude further inquiry into the experimental nature of the use where the contract or the offer stated that the sale was for experimental purposes (*Austin* and *Ushakoff, supra*); or showed that the device was still experimental and that no workable prototype had been made (*Americo Contact Plate Freezers, supra*); or required that the invention should be kept confidential or from public view, or that reports on the use of the invention should be supplied to the inventor (*Ajem Laboratories, Cataphote,* and *Piet, supra*); or other similar statements appeared from which it could clearly be implied that the sale or the offering was made for an experimental purpose.
>
> In cases where the exceptions did *not* appear in the sale or offering for sale, summary judgment would be permissible and proper. If the exceptions did appear, then a trial on the merits could dispose of exceptions made falsely or collusively and, generally, the permits of the claimed exceptions.
>
> Where there has been commercial exploitation, the courts have generally found there was "public use" and not experimental use. *Smith & Griggs Mfg. Co.* and *FMC Corp., supra.* But even in case of a sale where the real purpose was experimentation, the patent is still valid. *Watson* v. *Nelson, supra.* Thus obtaining some monetary return from a sale made primarily for experimental purposes may not constitute in every case a "commercial exploitation" which invalidates the patent.

Under this rule, where there was some commercial exploitation, a showing that a sale or offering for sale was conditioned upon experimentation would preclude summary

judgment against patentability. The court could then hear proof on the merits and determine the case came within the experimental exception.

Id. at 433-34 (emphasis in original).

MacDermid's brief urges us to find that *Robbins* is unsound, too narrow, rejected by other circuits,[3] and ignores non-technical testing. The members of this panel did not sit in *Robbins*. Even though some of us believe the Robbins standards to be unnecessarily restrictive, we pointed out at the oral arguments and reiterate here that this panel cannot overrule another panel under the rules of this Circuit. A reversal of *Robbins* can only be done *en banc*. Furthermore, this court in *Cataphote Corp.* v. *DeSoto Coatings, Inc.*, 356 F. 2d 24 (9th Cir. 1966), has specifically held that the question of experimental use is left for the trier of fact, and we are to consider on review only whether the trial court's findings were clearly erroneous. Considering the law of this Circuit, we must affirm Judge Byrne's finding that the Laue patent was on sale for more than one year prior to application. It appears that varying quantities (some substantial) of either the solution itself or the chemicals from which it could be made were shipped to Steel Products Engineering Co., IBM, Academy Plating Company, Eaton Mfg. Co., and R & S Plating, one year before the application date. What could be classified as "sales pitches" were also made to National Cash Register and Metropolitan Specialities prior to January 30, 1963, and MacDermid representatives were even given instructions on what were the selling points of the product. The contracts or offers do not show that there was any restriction on keeping the product confidential or stating that the sale was for experimental purposes, or that test results must be supplied to MacDermid. While

MacDermid would have us believe that customers realized the product was still experimental because of the "X" designation on the label of the solution as X-381 (before it was named), one of the customers testified that he did not know what the "X" stood for and did not consider it as designating an experimental product. We cannot conclude that the trial judge erred in resolving the conflicts in the testimony relating to whether the product was on sale. Hence, the conclusion that the Laue patent is invalid must stand. Having so found, we do not need to reach the question of whether the patent is valid or invalid, obvious or non-obvious, in light of the prior art.

The Slominski Patent

While all five claims of the Slominski patent were invalidated on grounds of obviousness, only claim 3 is appealed here by MacDermid. Claim 3 states:

> A copper etchant solution as defined in claim 1, wherein the sodium chlorite is 0.375 molar, the ammonium salt is 0.75 molar ammonium bicarbonate and 1.0 molar in a member selected from the group consisting of ammonium chloride, ammonium nitrate and mixtures thereof.

In considering the question of whether claim 3 of Slominski was obvious, we must be guided by *Graham* v. *John Deere Co.*, 383 U. S. 1 (1965) which states:

> While the ultimate question of patent validity is one of law, *A. & P. Tea Co.* v. *Supermarket Corp.*, *supra*, at 155, the § 103 condition, which is but one of the three conditions, each of which must be satisfied, lends itself to several basic factual inquiries. Under § 103, the scope and content of the prior art are to be determined, differences between the prior art and the claims at issue are to be ascertained; and

> the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy.

Id. at 17-18.

As we have already noted, there were many similar patented solutions, although they may not have been put to use in the printed circuit industry for copper stripping. Indeed, the Laue and Slominski patents used virtually identical chemical solutions except for Slominski claim 3 which uses a mixture of ammonium chloride and ammonium carbonate instead of ammonium carbonate alone as in Laue. The purpose of adding the ammonium chloride was to increase the oxidizing rate. However, as the district court found, the Laue patent in Column 1, lines 55-59 pointed out that while ammonium carbonate was the preferred ammonium salt for buffering, other ammonium salts such as sulfate, nitrate, and chloride would function effectively. The LeSueur patent at lines 45-57 stated:

> The solution that I prefer, however, depends for its usefulness on *the remarkable fact which I have discovered—that an ammoniacal solution of cupric hydroxid, for instance, has its oxidizing powers extraordinarily enhanced by the addition of certain apparently inert salts of ammonia.* The salts I prefer for this purpose are the sulfate and nitrate, and when a small quantity of either or both of these is added to the above-mentioned solution the rapidity with which said solution attacks finely-divided copper is extraordinary. (Emphasis added).

While the LeSueur patent cautioned that ammonium chloride should not be used where electrolytic extraction is used to recover dissolved copper, because a dangerous compound of nitrogen chloride might result, there is no such danger where the chemical precipitation method of recovery is used. Both the Laue and Slominski patents used the chemical precipitation method of copper recovery. The French patent for dissolving copper also mentions adding to the aqueous solution of sodium chlorite ammonia and/or ammonium salts such as chloride, sulfate, bicarbonate, acetate, phosphate, or mixtures of these salts. The patent examiner did not have references to the French patent or LeSueur before him in Slominski. We have already pointed out that this was an area in which a great deal of experimentation had taken place, and the district court found that the level of skili was quite high because of the knowledge of the chemists who testified either in person or by deposition in this trial. We believe, given Laue, the teachings of LeSueur, and the French patent above described, it would have been obvious to one skilled in the chemistry of metal dissolution to add ammonium chloride to increase the oxidizing rate. The district court's findings are not clearly erroneous under the standard for review stated in *Saf-Guard Products, Inc.* v. *Service Parts, Inc.*, 532 F. 2d 1266 (9th Cir.) *cert. denied* 45 U. S. L. W. 3302 (U. S. Oct. 19, 1976) and we further conclude the district court was correct in invalidating claim 3.

Attorneys Fees

Southern contends that MacDermid committed fraud on the patent office because at the time of applying for the patents they were aware that both solutions had been on sale for more than one year. However, *Robbins, supra,* was decided well after those applications were submitted, and

Robbins clarified the law in the Ninth Circuit. Furthermore, we believe that MacDermid held a good faith belief that their activities should fall within the experimentation exception. The determination of bad faith and the awarding of attorneys fees rests within the sound discretion of the trial court. *Bates Industries, Inc.* v. *Daytona Sports Co.*, 441 F. 2d 1110 (9th Cir.) *cert. denied* 404 U.S. 991 (1971); *Super Mold Corp.* v. *Clapp's Equipment Division, Inc.*, 397 F. 2d 932 (9th Cir. 1968). We also note that:

> Proof of a patent's invalidity does not necessarily establish bad faith on the part of the patentee who has charged infringement of his patent.

Id. at 935. We will not disturb the district court's action in refusing to award attorneys fees.

We conclude the trial court tried well a difficult case, carefully analyzed the evidence and reached a result consistent with the law as announced in this circuit. We therefore affirm on all issues.

FOOTNOTES

[1] Claim 1 of the Laue patent reads as follows:

> 1. A solution for dissolving metals of the class consisting of copper, zinc, brass, cadmium and silver, which consists essentially of an ammoniacal aqueous solution of sodium chlorite, wherein said chlorite is present in amount from about 0.1m./1. to saturation and said solution has a pH of from 8 to 13.

Claim 4 of the Laue patent is dependent on claim 2. Those claims read as follows:

> 2. A solution for dissolving metals of the class consisting of copper, zinc, brass, cadmium and silver, which consists essentially of sodium chlorite and ammonium hydroxide wherein the concentration of the sodium chlorite is from about 0.1 to 0.5m./1. and said solution has a pH of from 8 to 13.

> 4. A solution as defined in claim 2, which further includes an ammonium salt in equivalent ratio of 1:2 relative to ammonium hydroxide.

[2] Claims 1, 3 and 4 of the Slominski patent read as follows:

> 1. A copper etchant solution consisting essentially of water, sodium chlorite, ammonium hydroxide and an ammonium salt selected form the group consisting of ammonium chloride, ammonium nitrate, ammonium bicarbonate and mixture thereof wherein at least one of said nitrate and chloride salts is always present, and wherein the chlorite concentration is from about 0.1 mol per liter to saturation, the ammonium salt concentration is from about 0.2 molar to saturation, and ammonium hydroxide is present in amount to produce a minimum pH of about 9.0 in the solution.
>
> 3. A copper etchant solution as defined in claim 1, wherein the sodium chlorite is 0.375 molar, the ammonium salt is 0.75 molar ammonium bicarbonate and 1.0 molar in a member selected from the group consisting of ammonium chloride, ammonium nitrate and mixtures thereof.
>
> 4. A process of dissolving copper from a copper substrate, which comprises:
>
> (a) providing an etchant solution of the composition defined in claim 1, said solution being initially at approximately room temperature;
>
> (b) contacting the copper bearing substrate to be etched with said etchant solution for a period sufficient to dissolve the desired amount of copper therefrom;
>
> (c) progressively increasing the solution temperature to not over 55°C. as the amount of dissolved copper in the etchant solution increases and the etching rate thereof decreases;
>
> (d) periodically adding ammonium hydroxide to the solution to maintain the pH at not lower than about 9.0.

[3] *See In re Yarn Processing Patent Validity Litigation*, 498 F. 2d 271 (5th Cir.), *cert. denied* 419 U. S. 1057 (1974).

UNITED STATES DISTRICT COURT

CENTRAL DISTRICT OF CALIFORNIA

No. 69-1831-WMB

MACDERMID, INCORPORATED, a corporation,
Plaintiff,

vs.

SOUTHERN CALIFORNIA CHEMICAL CO., INC.,
a corporation,
Defendant.

FINDINGS OF FACT AND CONCLUSIONS OF LAW

INTRODUCTION

On September 15, 1969, plaintiff MacDermid filed its complaint in Civil Action No. 69-1831-WMB against defendant Southern California Chemical Co., Inc. for alleged infringement of U. S. Patent No. 3,231,503 and U. S. Patent No. 3,466,208. Defendant's answer was filed November 7, 1969, and included counterclaims for a declaratory judgment of invalidity and non-infringement of the patents in suit. The defendant also counterclaimed charging the plaintiff with violation of the antitrust laws of the United States by procuring U. S. Patent No. 3,466,208 through fraud on the United States Patent Office, and by plaintiff's attempt to enforce the patent against the defendant. Under the pre-trial conference order in this action, the defendant's antitrust charges are severed for a separate trial pending the outcome of the patent issues.

This action was tried November 6 through 13, 1973, without a jury.

FINDINGS OF FACT

The Nature of the Action and the Parties

1. This is an action for infringement of Laue United States Patent No. 3,231,503 entitled AMMONIACAL AQUEOUS SOLUTION CONTAINING SODIUM CHLORITE AND USED FOR DISSOLVING METALS (issued January 25, 1966 on an application filed January 30, 1964), and Slominski United States Patent No. 3,466,208 entitled SOLUTION AND METHOD FOR DISSOLVING COPPER (issued September 9, 1969 on an application filed December 18, 1967, which application was based on an earlier application filed March 6, 1967).

2. Plaintiff is MacDermid Incorporated ("MacDermid"), a Connecticut corporation having its office and principal place of business at Waterbury, Connecticut. MacDermid is the owner of both patents in suit. At Waterbury, and also at other locations in the United States, MacDermid prepares the components of the patented solutions and sells those components under the trade names "METEX MU A and B", "STRIPPER F A and B" and "METEX MU 14 and B". These solutions are used to strip copper metal from steel parts coated with copper, and to etch copper from printed circuits.

3. Defendant, the accused infringer in this action, is Southern California Chemical Co., Inc. ("SCC"), a California corporation having its office and principal place of business in Santa Fe Springs, California. Accused as an infringement of both patents in suit is SCC's alkaline etchant solution which it makes and sells under the name "AE-25". AE-25 is sometimes sold by SCC in component parts with instructions as to how to mix the parts together to make the patented solutions, and it is sometimes sold pre-mixed.

4. This court has jurisdiction over the subject matter and the parties to this action by virtue of the patent laws of the United States (Title 35 U. S. C.); jurisdiction and

venue are based on Title 28 U. S. C. §§ 1338(a) and 1400(b), respectively.

The Laue Patent

5. The Laue U. S. Patent No. 3,231,503 (Ex. 1) discloses a water-based solution for dissolving metals such as copper, zinc, brass, cadmium and silver. The four ingredients in the solution claimed by the Laue patent are:

(i) water (aqueous solution);

(ii) sodium chlorite ($NaClO_2$), an oxidizer which converts neutral copper metal atoms into positively charged copper ions which go into solution;

(iii) ammonium hydroxide (NH_4OH) to supply excess ammonia (NH_3) as a complexer to combine with oxidized copper ions and keep them in solution. The ammonium hydroxide also keeps the solution in the alkaline pH range of 8-13; and

(iv) an ammonium salt selected from the group consisting of ammonium bicarbonate (NH_4HCO_3), ammonium chloride (NH_4Cl), ammonium nitrate (NH_4NO_3), and ammonium sulfate [$(NH_4)_2SO_4$] to supply ammonia as a complexer for the dissolved copper ions, and to provide buffering for the solution. "Buffering" is the action produced by a chemical to stabilize the pH of a solution in which the chemical is dissolved. (T.236,237)

6. Plaintiff charged defendant with infringement of claims 1 and 4 of the Laue patent. Claim 1 reads as follows:

> "1. A solution for dissolving metals of the class consisting of copper, zinc, brass, cadmium and silver, which consists essentially of an ammoniacal aqueous solution of sodium chlorite, wherein said chlorite is present in amount from about 0.1 m./1. to saturation and said solution has a pH of from 8 to 13."

Claim 4 of the Laue patent is dependent on claim 2. Those claims read as follows:

> "2. A solution for dissolving metals of the class consisting of copper, zinc, brass, cadmium and silver, which consists essentially of sodium chlorite and ammonium hydroxide wherein the concentration of the sodium chlorite is from about 0.1 to 0.5 m./1. and said solution has a pH of from 8 to 13."
> "4. A solution as defined in claim 2, which further includes an ammonium salt in equivalent ratio of 1:2 relative to ammonium hydroxide."

7. The relative amounts of chemicals called for by the Laue patent claims are not critical, and neither of the parties to this litigation contended otherwise. Moreover, the Laue patent states that the solution is not critical as to oxidant concentration, the solution being operable from at least as little at 0.1 mols/liter to near saturation (Ex. 1, col. 1, 1.69-71). The Laue patent also states that the concentration of the complexer depends on the amount of copper or other metal to be dissolved, the complexer being present in excess over the copper in a mol ratio of at least 2:1. Larger excesses of complexer are preferred to compensate for the volatility of the ammonia gas (Ex. 1, col. 2, 1.1-6). Thus, the patent makes it clear that the oxidant and complexer can be in the solution in amounts over a wide range.

The Solutions of the Laue Patent Were in Public Use and on Sale More Than One Year Before the Filing Date of the Application for the Laue Patent

8. The Laue patent application was filed January 30, 1964. More than one year before that date, and, accordingly, before the critical date of the application, water solutions of chemical components for making an etchant solution were on sale by plaintiff as X-381A and X-381B. These

materials were sold and offered for sale with instructions for mixing them together and with more water, resulting in plaintiff's X-381 etchant solution covered by the Laue patent claims. The solutions were also used before the critical date in their intended way by customers of the plaintiff. (Exs. S,T,A-A,G-S and G-T, answers to Interrogatories Nos. 20,22,23,43,45 and 46). For each of the X-381 solution transactions before January 30, 1963 there was neither an express nor a clearly implied condition that the use, sale or offering was made primarily for experimental use. Accordingly, the Laue patent is invalid under 35 U.S.C. § 102(b).

MacDermid's X-381 Transactions With National Cash Register

9. On March 5, 1962, Laue, the inventor named in the Laue patent, reported to plaintiff's management on his visit to National Cash Register at Dayton, Ohio as follows:

> ". . . We tested this customer's reaction to our new stripper X-381 for removing copper from steel by immersion. . . . They were impressed by the high speed and good capacity. We plan to finish our work on X-381 and have it priced and officially introduced through N. C. Purchasing. Gil will push for introduction of this material, at first, for the stud stripping operation." (Ex. n, paragraph 6)

10. On July 19, 1962, Laue's work on the X-381 solution had progressed to the point where his supervisor reported to plaintiff's president that:

> "The work on stripping copper from steel has been finished. The product is Metex X-381." (Ex. 4)

11. Laue's August 1, 1962 memo to plaintiff's purchasing agent asked the agent to purchase raw materials for X-381. (Ex. S)

12. On August 23, 1962 Laue prepared the plant formula instruction sheet for the production of X-381A and X-381B components (Ex. T).

13. On August 31, 1962 Laue wrote National Cash Register:

> ". . . We are ready with the X-381 . . . the system is still essentially the same as we demonstrated in March 1962 . . . X-381 might well be suited for your stud stripping." (Ex. G-L. first document)

14. Also on August 31, 1962 Laue wrote the purchasing agent for National Cash Register:

> "We are submitting to you a data sheet and cost information on our new product Metex X-381.
>
> "X-381 is a chemical stripper for copper from steel, which has high speed and capacity and good stability.
>
> "During the development of this product we had an opportunity to discuss it with Walter Moline of your Metal Processing Division, who expressed his interest." (Ex. G-L, second document)

15. There is nothing in Laue's August 31, 1963 letter to National Cash Register's purchasing agent to suggest that plaintiff's X-381 solution was being offered for any kind of an experiment. In fact, the opposite conclusion must be drawn from Laue's September 27, 1962 interoffice memo to Gil Osterfeld, an employee of plaintiff. The memo stated:

> "Concerning X-381, you will recall that we now made an official offer to National Cash; how are chances?" (Ex. Z)

16. National Cash Register's purchase orders (Ex. B-Y, third and fourth documents) dated January 9, 1963

to plaintiff for the X-381A and X-381B solutions, bear the notation "trial order". There is no evidence that "trial order" meant anything other than National Cash Register would try the solution to see if it worked on National Cash Register's product. There is no express or even implied condition that the sale or offering to National Cash Register was made primarily for experimental use.

Plaintiff's X-381 Transactions With Steel Products Engineering Co.

17. On November 14, 1962, 100 gals. of chemicals used to prepare the X-381 solution were priced, invoiced and shipped by plaintiff to Steel Products Engineering Co. (SPECO) in Springfield, Ohio. (Ex's G-S and G-T, answers to Interrogatories Nos. 22 and 23).

18. Before the first priced and invoiced X-381 transaction of November 14, 1962, plaintiff had furnished SPECO quart-size quantities of X-381. The quart-size samples were sufficient for a lab test, but not adequate for a production run. (Ex. 40, Rebbin deposition, pp. 11-13). After the test with the quart-size samples, and still before the November 14, 1962 invoiced transaction, plaintiff gave SPECO enough material to make up a 50 or 75 gal. drum of the X-381 solution. The 50 or 75 gals. were used by SPECO to simulate a production run on expensive parts, which were sold by SPECO. (Ex. 40, pp. 30, 31 and 35).

19. After the simulated production run with the sample furnished by plaintiff, SPECO ordered a new 200 gal. tank, and made a production run using the 200 gals. formulated with the X-381A and X-381B procured by SPECO's purchase order dated November 13, 1962. (Ex. 40, pp. 31, 34).

20. On January 17, 1963, plaintiff shipped, priced and invoiced to SPECO another 150 gals. of the chemicals used

to make the X-381 etchant solution, and again on January 30, 1963 another 100 gals. (Ex. G-T).

21. There is no proof that SPECO actually paid for the materials shipped to them. Even so, the X-381 product was on sale before the critical date of January 30, 1963. Plaintiff company was attempting to sell the patented idea. At the very least, these transactions were an offer by plaintiff to sell to SPECO solutions covered by the Laue patent claims.

22. There was no restriction on any of the X-381 solution plaintiff shipped to SPECO. The sale or offer to sell was not for testing or experimenting. Laue had already demonstrated to the satisfaction of his supervisor, Innes, that the X-381 solution would strip copper from steel without damaging the steel. The so-called field tests at SPECO were not undertaken in uncertainty as to whether the solution would strip copper from steel, or to determine whether the solution should be altered in any way to effect the stripping of copper from steel. That had already been proved by Laue. The purpose of the SPECO transaction was to sell the product, and to let the customer see for itself that the solution would successfully strip copper from steel under the customer's operating conditions. The SPECO transaction may have been market acceptance testing, but it was not experimental testing to determine how the solution should be made, or what ingredients should be used. There was no experimental program or procedure contemplating any variation of the ingredients in the X-381 solution. Moreover, the composition of the X-381 solution was never changed from the time that Laue's superior announced to plaintiff's president that it was ready until the solution was displaced by the Slominski solution (T.301).

23. The use of the X-381 solution in a production run to treat parts which SPECO subsequently sold was also a public use under 35 U. S. C. § 102(b).

Plaintiff's X-381 Transaction With IBM

24. On October 22, 1963, plaintiff shipped, priced and invoiced 25 gals. of the X-381 solution to IBM. (Ex. G-S, plaintiff's answer to Interrogatories Nos. 22 and 23). This transaction is referred to in plaintiff's salesman's report of October 27, 1962 as follows:

> "Was aware they do copper plating for heat treat stopoff and in our discussion learned that they have just purchased last week X-381 for stripping the copper after heat treating." (Ex. A-I, pp. 1, 2)

25. IBM paid for the shipment. (T. 113-114, 158) Plaintiff's sale of the X-381 solution to IBM was not for experimental purposes.

Plaintiff's X-381 Transactions With Academy Plating Company, Eaton Mfg. Co., R&S Plating and Metropolitan Specialties

26. Plaintiff also invoiced and shipped materials for making the X-381 solution to Academy Plating, Eaton Mfg. Co., and R & S Plating more than one year before the filing date of the application for the Laue patent. (Ex. G-S, answer to Interrogatory Nos. 22 and 23). Those materials were sold or on sale. Plaintiff's sales effort on January 28, 1963 to sell Metropolitan Specialties X-381 solution was described by Gene Weiner, plaintiff's salesman at that time, as "a last ditch attempt to get the account". (Ex. 5; Ex. G-S, answer to Interrogatory No. 135; Ex. G-V, Weiner deposition p. 28).

27. The claimed subject matter in the Laue patent would not have been obvious to a man of ordinary skill in the metal-stripping art at the time the claimed invention was made. Accordingly, Laue patent claims 1 and 4 would be valid and infringed by defendant's AE-25 solution, but for being invalid under 35 U. S. C. § 102(b).

Slominski U. S. Patent No. 3,466,208

28. Plaintiff charged defendant with infringement of claims 1, 3 and 4 of the Slominski patent. They read as follows:

> "1. A copper etchant solution consisting essentially of water, sodium chlorite, ammonium hydroxide and an ammonium salt selected from the group consisting of ammonium chloride, ammonium nitrate, ammonium bicarbonate and mixture thereof wherein at least one of said nitrate and chloride salts is always present, and wherein the chlorite concentration is from about 0.1 mol per liter to saturation, the ammonium salt concentration is from about 0.2 molar to saturation, and ammonium hydroxide is present in amount to produce a minimum pH of about 9.0 in the solution.
>
> "3. A copper etchant solution as defined in claim 1, wherein the sodium chlorite is 0.375 molar, the ammonium salt is 0.75 molar ammonium bicarbonate and 1.0 molar in a member selected from the group consisting of ammonium chloride, ammonium nitrate and mixtures thereof.
>
> "4. A process of dissolving copper from a copper substrate, which comprises:
>
> (a) providing an etchant solution of the composition defined in claim 1, said solution being initially at approximately room temperature;

(b) contacting the copper bearing substrate to be etched with said etchant solution for a period sufficient to dissolve the desired amount of copper therefrom;

(c) progressively increasing the solution temperature to not over 55°C. as the amount of dissolved copper in the etchant solution increases and the etching rate thereof decreases;

(d) periodically adding ammonium hydroxide to the solution to maintain the pH at not lower than about 9.0."

The Identical Ingredients Claimed by the Slominski Patent Are Taught by the Prior Art

29. The four ingredients in the solution defined by the Slominski patent claims are:

(i) water;

(ii) sodium chlorite ($NaClO_2$);

(iii) ammonium hydroxide (NH_4OH) to produce a minimum pH of about 9.0; and

(iv) an ammonium salt selected from the group consisting of ammonium chloride (NH_4Cl), ammonium nitrate (NH_4HCO_3), and mixtures thereof, wherein at least ammonium chloride or ammonium nitrate is always present.

These same four ingredients are disclosed in the Laue patent. (Ex. 1)

30. The Slominski patent and the Laue patent make it clear that none of the concentrations of the ingredients set forth in the Slominski patent claims is critical, and neither of the parties contended otherwise. The Slominski patent states in Col. 3, lines 67-73 that:

"The solution is not critical as to oxidant concentration since as little as 0.1 mol per liter of sodium chlorite will provide some stripping action, although obviously the rate is low. At the other extremes, the concentration may be anything up to the saturation limit of the chlorite in the solution."

31. As to the non-criticality of the concentration of the ammonium salts, the Slominski patent states in Col. 3, lines 74-75, and Col. 4, lines 1-29:

". . . The ammonium ion concentration should always exceed that of the copper dissolved in the solution and generally the preference is for an excess over the copper in a mol ratio of at least 2:1. This is supplied, of course, by the ammonium hydroxide as well as ammonium chloride, nitrate, and bicarbonate used. Since the amount of ammonium hydroxide required is determined largely by the requirement for maintaining a solution pH of at least 9.0, it is generally recommended to employ about 3 mols per liter of the base. The ammonium chloride, nitrate, bicarbonate concentration in such system should be at least 0.2 mol per liter and is preferably 2.0 mol per liter for achieving maximum etch rate and copper capacity. A practical upper limit for the ammonium cholride, or nitrate, and bicarbonate if present, is generally about 4.0 mol per liter."

32. The Laue patent discloses a solution of water, sodium chlorite, ammonium hydroxide, and an ammonium salt selected from the group consisting of ammonium chloride, ammonium nitrate, and ammonium bicarbonate for etching copper from printed circuits.

33. The Laue patent also discloses that the solution is within the alkaline range of pH 8-13. For better pH control, the solution is buffered with an ammonium salt in the

equivalent ratio of 1:2 relative to ammonium hydroxide in the solution. (Col. 1, lines 50-54)

34. The Laue patent also states (Col. 1, lines 55-59) that ammonium carbonate (which is produced by the reaction of the ammonium hydroxide and ammonium bicarbonate) is the preferred ammonium salt for buffering the pH of the solution, but that other ammonium salts, such as, ammonium chloride (NH_4Cl), or ammonium nitrate (NH_4NO_3) will function effectively, and are useful if the substrate from which the copper is being stripped is not attacked by the anions (nitrate or chloride ions) of these ammonium salts.

35. In short, the Laue patent discloses an ammoniacal aqueous solution of sodium chlorite ($NaClO_2$), ammonium hydroxide (NH_4OH), and an ammonium salt, preferably ammonium carbonate [$(NH_4)_2CO_3$], but also permitting the use of other ammonium salts, such as ammonium chloride or ammonium nitrate (Col. 1, lines 55-59). The Laue patent disclosure and intent to claim the use of ammonium salts other than ammonium carbonate or bicarbonate is shown by claim 4 of the Laue patent. Claim 4 is dependent on claim 2, which defines a solution that includes sodium chlorite and ammonium hydroxide. Claim 4 merely adds the limitation that the solution includes "an ammonium salt in equivalent ratio of 1:2 relative to ammonium hydroxide". Thus, Laue patent claim 4 is not limited to any specific ammonium salt, such as the ammonium bicarbonate specifically disclosed in Example 1 of the Laue patent (Col. 2, lines 45-51).

36. The Laue patent also discloses in Col. 1, lines 69-71 that the solution is not critical as to oxidant concentration, being operable from at least as little as 0.1 mol per liter to

near saturation, exactly as called for in the Slominski claims.

37. The Laue patent also discloses in Col. 2, lines 1-6 that the concentration of the complexer (the ammonium salt or the ammonium hydroxide which supplies the ammonium ion as a complexer) depends on the amount of copper or other metal to be dissolved, the complexer being present in excess over the dissolved copper in a mol ratio of at least 2:1, which is exactly what is disclosed in the Slominski patent in Col. 3, lines 74-75, and in Col. 4, lines 1-17. Thus, Laue states, and is echoed by Slominski, that the amount of ammonium salt in the solution depends on the amount of copper which is to be dissolved.

38. The Laue patent also discloses in Col. 2, Examples 1 and 4, that the amount of ammonium salt present is 1.5 mols per liter in Example 1, and 2.25 mols per liter in Example 4. These concentrations of ammonium salts are within the range disclosed by the Slominski patent in Col. 4, lines 24-29, and covered by the Slominski patent claims.

39. The Laue patent does not specifically disclose a solution which includes a mixture of ammonium carbonate and either ammonium chloride or ammonium nitrate, although the patent does state that these three ammonium salts can be used interchangeably. However, that mixture is disclosed in LeSueur U. S. Patent 755,302 (Ex. C), which describes the use of an ammoniacal ammonium carbonate solution with cupric (Cu^{++}) ions as an oxidizer for copper metal. The chemistry described in the LeSueur Patent and the 1954 Butts textbook (Ex. H, p. 303) are the same (T. 488-490), except that the textbook does not mention the use of ammonium chloride or ammonium nitrate. The LeSueur patent teaches that the oxidizing

power of an ammoniacal ammonium carbonate solution with an oxidizer for dissolving copper is "extraordinarily enhanced" by the addition of ammonium nitrate (NH_4NO_3) or ammonium chloride (NH_4Cl)—the same two salts claimed by Slominski for the same effect.

40. The LeSueur patent warns that the use of ammonium chloride might result in the formation of a dangerous compound (nitrogen chloride) *if* electrolytic extraction is *subsequently* used to recover dissolved copper from the solution which used ammonium chloride. This clearly suggests to one skilled in the art that ammonium chloride can be used "if electrolytic extraction" is not subsequently used to recover copper from the spent solution. T. 454, 498, 499) "Electrolytic extraction" is only one of two general procedures which may be used to recover copper from solution, once the copper has been dissolved. The LeSueur patent described (on page 2, at lines 17-27) the two methods for extracting the dissolved copper. One is the electrolytic or electrical extraction. The second is chemical precipitation, which presents no danger of the formation of nitrogen chloride, even if ammonium chloride is used to enhance the oxidizing power of the solution. The chemical precipitation method for recovering dissolved copper from the solution is the one disclosed in the Laue patent (Col. 2, lines 32-38) and the Slominski patent (Col. 3, lines 49-59).

41. The LeSueur patent discloses that ammonium chloride will enhance the oxidizing power of the LeSueur solution. Dr. Linford testified on cross-examination:

> "I do know that LeSueur said it can operate better with a chloride present." (T. 383)

42. As discussed more fully in Findings 52-56 below, plaintiff's first MU-14 solution using ammonium chloride

(with no ammonium bicarbonate) and sodium chlorite in an ammoniacal aqueous solution was in public use on or about November 8, 1966 at North American Printed Circuits, Stafford, Connecticut, and at Circuits, Inc., Berlin, Connecticut. It was known at that time that the solution containing the ammonium chloride had a greater oxidizing power than a similar solution which included ammonium bicarbonate instead of ammonium chloride. This public use occurred more than one year before the filing date to which the Slominski claims are entitled, namely, the filing date of the second application for the Slominski patent. Accordingly, the prior art as to the Slominski patent includes the use of ammonium chloride to enhance the oxidizing power of an ammoniacal aqueous solution which contains sodium chlorite.

43. French Patent No. 1,469,901 (Ex. J) discloses a copper etching solution which includes the combination of sodium chlorite, ammonia, ammonium chloride and ammonium bicarbonate. The effective date of the French patent is February 17, 1967. As discussed more fully below in Findings 52-56, the earliest date of invention to which the Slominski claims are entitled is the filing date of the second or continuation-in-part application, namely, December 18, 1967. The French patent English translation points out on page 2 the disadvantage of using acid etchants to dissolve copper from printed circuit boards, and teaches how to avoid that disadvantage with "an aqueous solution of sodium chlorite which contains ammonia and ammonium salts, which makes it possible to obtain high-quality etched products" (p. 3). The translation of the French patent also states in paragraph 4 of page 3 that the etching is effected in a pH range of 8 to 11, preferably in the vicinity

of pH 9. The last paragraph of page 3 of the translation states:

> "In accordance with the invention the applicant has found that the drawbacks mentioned can be avoided when the work is done . . . with *aqueous solutions of sodium chlorite* ($NaClO_2$) in an *alkaline pH range,* to which solutions are added *ammonia and/*or *ammonium salts,* as, for example, *ammonium chloride,* sulfate, *bicarbonate,* acetate, phosphate, *or mixtures* of these salts. It is particularly advantageous to work in a pH range from 8 to 11, in particular in the vicinity of pH 9." (Emphasis added)

The portion of the French patent just quoted specifically discloses an aqueous solution of sodium chlorite in an alkaline pH range of 9, and including ammonia and a mixture of ammonium chloride and ammonium bicarbonate.

44. About July 11, 1966, plaintiff was spurred into work on improving the Laue solution because a competitor, Hubbard Hall, had an alkaline etching solution which was faster than the Laue solution (Ex. 24, p. 2). The final result of this work by plaintiff was its second MU-14 solution which included a mixture of ammonium carbonate and ammonium chloride. Plaintiff's second MU-14 solution was sold March 6, 1967 (Ex. G-S, answers to Interrogatories Nos. 44, 45 and 46). But plaintiff's ammoniacal etching solution which included sodium chlorite, ammonium carbonate, and ammonium chloride came after Hubbard Hall's.

45. Defendant ordered some of Hubbard Hall's alkaline etching solution in November, 1966 (Ex. C-L), but did not analyze the Hubbard Hall material until March 28, 1968 (Ex. C-Q; T. 672-673). That analysis showed that the Hubbard Hall alkaline etchant contained sodium chlorite, ammonium chloride, ammonium carbonate, and ammonium hydroxide (aqua ammonia), the same four chemicals claimed by the Slominski patent. Thus, in addition to the February 17, 1967 disclosure in the French patent, in November of 1966 Hubbard Hall already had an alkaline etching solution which contained the same chemicals claimed by Slominski, whose earliest date of invention is December 18, 1967, the filing date of his second or continuation-in-part application which resulted in the Slominski patent.

46. The level or ordinary skill in the art of metallurgy, electrochemistry, electroplating, and chemical treatment of metal surfaces is high, as indicated by the training and experience of Mr. Innes, Dr. Grunwald, Mr. Slominski of MacDermid, and of Mr. King from the late 1950's to date.

47. At the time Slominski made the alleged invention disclosed and claimed in his patent, it was obvious to one of ordinary skill in the chemistry of metal dissolution to add the ammonium nitrate or ammonium chloride salts disclosed in the LeSueur patent to the Laue patent solution, which was an ammoniacal aqueous ammonium carbonate solution containing sodium chlorite as the oxidizer for copper.

48. The Slominski patent solution which includes the mixture of ammonium carbonate and ammonium chloride salts produced no unexpected result. The inclusion of ammonium bicarbonate in an ammoniacal aqueous solution of sodium chlorite to enhance buffering and avoid solder darkening when the solution is used to etch copper from printed circuit boards was known before the earliest date to which the Slominski patent is entitled. As to buffering, the Slominski patent concedes that the Laue patent "recommends inclusion of ammonium bicarbonate specifically in

the chlorite system to serve as a buffer" (Slominski patent, col. 1, lines 45-47). As to the elimination of solder darkening, plaintiff's publication (Ex. 12, p. 3) to the trade lauds the Laue patent solution as not attacking solder (T. 153, 154, Ex. G-S; answer to Interrogatories Nos. 43, 45 and 46). When the ammonium chloride or ammonium nitrate salt was added to the Laue patent solution containing ammonium hydroxide, sodium chlorite, and ammonium carbonate, the oxidizing power of the solution increased as would be expected from the disclosure in the LeSueur patent and from the results obtained with plaintiff's first MU-14 solution, which contained ammonium chloride salt only.

49. The specific amounts of the various chemicals called for in the Slominski claims are in no way critical (T. 496, 506; Exs. 1 and 2). In view of the French patent and the disclosure in the LeSueur patent that the use of ammonium chloride or ammonium nitrate greatly enhances the oxidizing power of an ammoniacal ammonium carbonate solution, it would be obvious to add an adequate amount of either ammonium chloride or ammonium nitrate to the solution disclosed in the Laue patent to increase the oxidizing power of the solution. The solutions defined by Slominski patent claims 1, 2 and 3 are obvious in view of the prior art, and those claims are invalid under 35 U. S. C. § 103.

50. Slominski patent claims 4 and 5 define processes using the chemical solutions disclosed in the Laue patent in accordance with substantially the same process steps disclosed in the Laue patent. The difference between the processes disclosed in the Laue patent and those defined by Slominski patent claims 4 and 5 are such that the subject matter of claims 4 and 5 as a whole would have been obvious (at the time the alleged inventions defined by claims 4 and 5 were made) to a person having ordinary skill in the chemistry of metal dissolution (T. 506-512). Moreover, as discussed more fully in Findings 52-56 the processes defined by Slominski patent claims 4 and 5 were in public use November 8, 1966, more than one year before the December 18, 1967 filing date to which the Slominski patent is entitled. (Ex. G-S, answer to Interrogatory No. 77).

51. Plaintiff offered no corroborated evidence to show that the alleged invention claimed in the Slominski patent was made by Slominski before December 18, 1967, the filing date of the second or continuation-in-part application for the Slominski patent. Accordingly, Slominski is entitled to a date of invention no earlier than that of the second application.

The On-Sale and Public Use of the Slominski Solution

52. The first application for the Slominski patent was filed March 6, 1967. This application disclosed only the combination of sodium chlorite, ammonium hydroxide, and an ammonium salt selected from the group of ammonium chloride and ammonium nitrate. The first application specifically stated that ammonium bicarbonate should not be included in the solution (Ex. B, p. 1, line 25 *et seq*; T. 307, 338-9).

53. The second or continuation-in-part application for the Slominski patent was filed on December 18, 1967. This application amplified the disclosure of the first application to include the addition of ammonium bicarbonate to the solution originally disclosed in the first Slominski application. (In the Laue patent solutions and the Slominski patent solutions ammonium bicarbonate and ammonium carbonate are chemical equivalents, as explained in the Laue patent, Col. 1, 1.61-68). Claims 1, 3, 4 and 5 of the Slominski patent all cover the inclusion of ammonium

bicarbonate in the solution. Slominski patent claim 2 does not include ammonium bicarbonate, so it is entitled to the filing date of the first application. However, plaintiff did not charge defendant with infringement of claim 2, and in any event the claim is invalid as stated in Finding 49. Since the first Slominski patent application does not disclose ammonium bicarbonate, that application cannot satisfy the requirements of the first paragraph of 35 U. S. C. §112 for the presence of the bicarbonate. Therefore, plaintiff cannot rely on the benefits of 35 U. S. C. § 120 for Slominski patent claims 1, 3, 4 and 5, which all admit to bicarbonate inclusion, and thus can have the benefit of only the filing date of the application which first included the bicarbonate. This was the December 18, 1967 application. As to the given claimed subject matter, only one effective date is applicable.

54. At least as early as July 25, 1966 there was a sale of plaintiff's first Metex MU-14 solution. It contained aqua ammonia (ammonium hydroxide), sodium chlorite, and ammonium chloride, but did not contain ammonium carbonate. Later, the first MU-14 solution was changed to the second version by adding ammonium bicarbonate (the equivalent of ammonium carbonate). (Ex. G-S, answers to Interrogatories Nos. 44, 75 and 76). Aqua ammonia for the solutions was formed by the disassociation of ammonium hydroxide (T. 359). MU-14 was always sold with MU-B, which included sodium chlorite (T. 279, 280).

55. At least as early as November 8, 1966 there was a public use of plaintiff's Metex MU-14 incorporating the invention of the Slominski patent (Ex. G-S, answer to Interrogatory No. 77).

56. Slominski patent claims 1, 4 and 5 cover the solution both with and without ammonium bicarbonate, and

therefore read directly on plaintiff's first MU-14 solution (ammonium chloride with no ammonium bicarbonate) that was in public use and on sale more than one year before the effective filing date for these claims. Accordingly, claims 1, 4 and 5 are invalid under 35 U. S. C. § 102(b) because of plaintiff's admitted public use and on-sale activities.

Conclusions of Law

A. The court has jurisdiction of the parties and of the subject matter of the action under Title 28 U. S. C. §§ 1338(a) and 1400(b).

B. The activities of plaintiff, MacDermid, before the critical date of January 30, 1963 with respect to uses and sales of the solutions ultimately patented in U. S. Patent No. 3,231,503 placed the alleged invention in public use and on sale in this country more than one year before the date of application in the United States within the meaning of 35 U. S. C. § 102(b). To sustain the validity of the patent in light of these activities would circumvent both the terms and policy of that statutory provision. *Cataphote Corp.* v. *DeSota Chemical Coatings, Inc.*, 356 F. 2d 24 (9th Cir. 1966) *Robbins Co.* v. *Lawrence Mfg. Co.*, 482 F. 2d 426 (9th Cir. 1973).

C. The claims of U. S. Patent No. 3,231,503 are therefore invalid and void under 35 U. S. C. § 102(b).

D. The activities of plaintiff, MacDermid, before the critical date of December 18, 1966 with respect to uses and sales of the solutions and processes ultimately patented by claims 1, 4 and 5 in U. S. Patent No. 3,466,208 placed the alleged invention defined by those claims in public use and on sale in this country more than one year before the date of

application in the United States within the meaning of 35 U. S. C. § 102(b). To sustain the validity of claims 1, 4 and 5 of the patent in light of these activities would circumvent both the terms and policy of that statutory provision.

E. Claims 1, 4 and 5 of the U. S. Patent No. 3,466,208 are therefore invalid and void under 35 U. S. C. § 102(b).

F. The differences between the subject matter patented by all the claims of U. S. Patent No. 3,466,208 and the prior art are such that the subject matter as a whole would have been obvious, at the time that the alleged invention was made, to a person having ordinary skill in the art to which the subject matter pertained. All claims of U. S. Patent No. 3,466,208 are therefore invalid and void under 35 U. S. C. § 103.

G. Defendant Southern California Chemical Co., Inc., is entitled to judgment dismissing plaintiff's complaint in this action, and for its taxable costs and reasonable attorneys fees.

Dated: May 29, 1974

WM. MATTHEW BYRNE, JR.
United States District Judge

UNITED STATES DISTRICT COURT

CENTRAL DISTRICT OF CALIFORNIA

No. 69-1831-WMB

MACDERMID, INCORPORATED, a corporation,
Plaintiff,

vs.

SOUTHERN CALIFORNIA CHEMICAL CO., INC.,
Defendant.

IT IS HEREBY ORDERED that Conclusion of Law "G" is amended to read as follows:

Amended Findings of Fact and Conclusions of Law

G. Defendant Southern California Chemical Co., Inc., is entitled to judgment dismissing plaintiff's complaint in this action, and for its taxable costs.

Dated: June 4, 1974

WM. MATTHEW BYRNE, JR.
Wm. Matthew Byrne, Jr.
United States District Judge

District Court Judgment

UNITED STATES DISTRICT COURT

CENTRAL DISTRICT OF CALIFORNIA

No. 69-1831-WMB

MACDERMID, INCORPORATED, a corporation,
Plaintiff,

vs.

SOUTHERN CALIFORNIA CHEMICAL CO., INC.,
Defendant.

Final Judgment on Claim for Patent Infringement

This action came on for trial before the court, Honorable Wm. Matthew Byrne, Jr., District Judge, presiding, and the issues having been duly tried and a decision having been duly rendered pursuant to the findings of fact and conclusions of law entered by this court;

IT IS ORDERED AND ADJUDGED:

1. That the plaintiff take nothing, and the action be dismissed on the merits.

2. All the claims of U. S. Patent No. 3,231,503 are invalid and void.

3. All the Claims of U. S. Patent No. 3,466,208 are invalid and void.

4. That defendant be awarded its taxable costs of suit in the sum of $.

Dated: May 20, 1971

WM. MATTHEW BYRNE, JR.
Wm. Matthew Byrne, Jr.
United States District Judge